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DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service
Centers for Disease Control

# Memorandum

Date March 30, 1981

From Roger W. Rochat, M.D., Acting Director
Family Planning Evaluation Division (FPED), CHPE

Subject Trip Report, Tunis, Tunisia, February 1-4, 1981; Geneva, Switzerland, February 5, 1981; and London, England, February 5-6, 1981

To William H. Foege, M.D.
Director, Centers for Disease Control (CDC)
Through: Horace G. Ogden, Director,
Center for Health Promotion and Education (CHPE)


I. PLACES, DATES, AND PURPOSE OF TRAVEL
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## I. PLACES, DATES, AND PURPOSE OF TRAVEL

A. Tunis, Tunisia, February 1-4, 1981, to participate in an expert Study Committee on the Expansion of Voluntary Surgical Contraception into Rural, Remote and Peripheral Areas. This meeting was sponsored by the World Federation of Health Agencies for the Advancement of Voluntary Surgical Contraception.

B. Geneva, Switzerland, February 5, 1981, to visit the World Health Organization and discuss potential collaborative work between WHO and CDC.

C. London, England, February 5-6, 1981, to visit the International Planned Parenthood Federation in consultation on the development of the international survey of fertility and fertility control-related deaths in IPPF-associated countries.

## II. PRINCIPAL CONTACTS

A. Tunis, Tunisia, February 1-4, 1981:

Maumoud F. Fathalla, M.D., Dean, Faculty of Medicine, University of Assiut, Assiut, Egypt
Atiqur Rahman Khan, M.B.B.S., Dr.P.H., Bangladesh Fertility Research Program, Dacca, Bangladesh
Miguel Trias, M.D., Director of Urban Programs for Profamilia, Colombia

Professor M. Judono, Senior Advisor to Chairperson, National Family Planning Coordinating Board, Jakarta, Indonesia
Badri Rah Pande, M.D., Chief, Nepal Family Planning and Maternal and Child Health, Ministry of Health, Katmandu, Nepal
Virgilio Oblepias, M.D., Director, Fertility Care Center, Mary Johnston Hospital, Manila, Philippines
Mme. Souad Chater, Director General, National Office of Family Planning and Population, Tunis, Tunisia
Marilyn E. Schima, R.N., Ed.D., M.P.H., Executive Secretary, Association for Voluntary Sterilization, New York
Ms. J. Holfeld, Assistant Director for Programs and Field Operations, International Project, Association for Voluntary Sterilization, New York
Ms. Beth Atkins, World Federation of Health Agencies for the Advancement of Voluntary Surgical Sterilization, New York

B. Geneva, Switzerland, February 5, 1981:

Brian McCarthy, M.D., Maternal and Child Health Division, World Health Organization
Alex Kessler, M.D., Ph.D., Director of the Special Programme for Human Reproduction, World Health Organization
Mark A. Belsey, M.D., M.P.H., Human Reproduction Unit, World Health Organization
Julian Gold, M.B.B.S., World Health Organization

C. London, England, February 5-6, 1981:

Pramilla Senanayake, M.B.B.S., Director, Biomedical Sciences Department, International Planned Parenthood Federation
Dorine Kramer, M.D., Medical Epidemiologist, International Planned Parenthood Federation

III. ACCOMPLISHMENTS

I presented a paper on Monitoring Safety of Contraceptive Sterilization in Developing Countries: Assessing Mortality and Morbidity (available on request). I redrafted the medical standards for World Federation of Health Agencies for the Advancement of Voluntary Surgical Contraception (WFHAAVSC) and participated in a site visit to the Birzeit Family Planning Clinic where I observed a laparoscopic sterilization.

WFHAAVSC agreed to endorse the establishment of an international registry of sterilization-associated deaths and accept the definition of sterilization death which I proposed. Dr. Miguel Trias, Director of Urban Programs for Profamilia in Colombia, contributed information on four sterilization-associated deaths in Colombia (Table 1). He believes the reporting of sterilization-associated deaths is complete because Profamilia pays the costs

of treatment for all complications including deliveries for sterilization failures, but not for induced abortions, which are illegal. About half of sterilization procedures were by minilaparotomy and half by laparoscopy (Table 2). The reduction in minilaparotomy procedures in 1980 was due to a cutback in available financial resources. The sterilization death rates for Profamilia are 2.2 and 2.1 per 100,000 procedures for minilaparotomy and laparoscopy, respectively (Table 3).

Dr. Pande (Nepal) recalled 1 sterilization-associated death 14 days after the procedure. The death occurred in 1972 and was attributed to typhoid. Dr. Khan recalled 4 tetanus deaths associated with tubectomies in Khulna, Bangladesh, in 1974. Dr. Judono estimated that possibly 10 deaths had occurred in Indonesia.

The purpose of this meeting was to explore ways to improve accessibility of safe, voluntary sterilization services for couples living in rural, remote and peripheral areas who want permanent contraception. Some administrators believe that accessibility of surgical contraception alone will lead to its acceptance and use. In any case, this committee focused on improving the supply side, not motivating acceptors. Some participants provide selective health services to increase acceptability of sterilization services. Moreover, all participants felt surgical sterilization belonged in MCH services in primary health care, but several pointed out that vertical family planning programs were more effective and efficient.

Some of the critical problems relate to political acceptance, transportation, costs, variations in cultures, religion, and knowledge of methods. Other issues included inadequate facilities, lack of health manpower, need for community involvement, scarcity of medical supplies and drugs, limited transportation and communication, scheduling in rural areas, and models for delivering services. Some interesting points made by 1 or more persons include:

1) Counseling and informed consent may be more important for vasectomies than tubectomies: a) An unhappy vasectomized man may accuse the program of castration. b) Men have longer reproductive life spans than women during which to develop a reason to regret their operation. c) Women are more likely than men to be highly motivated because of pregnancy experiences to want sterilization. Similarly, a vasectomy-associated death may have more negative impact on a program than a tubectomy-associated death. Another corollary of this phenomenon is that sterilized women are more likely than men to favorably advertise their surgery to their friends. This subject requires more study.

2) Minimum essential facilities include a clean room with water and adequate light and usual toilet facilities.

3) Community involvement is more essential in remote and rural areas than in urban and peripheral areas. Need support of community leaders; need adequate information, education, babysitting, transportation, followup services including the reporting of complications needing assistance.

4) Rates of denial of sterilization services vary between 1% and 10% of those requesting sterilization. In Colombia 1-2% are denied for medical reasons, 10-15% because they are too young, too old, or do not have enough children. In Nepal about 10% are denied services for medical reasons. In the Philippines, about 10% are denied services. A major reason for denying a woman surgical contraception is that the woman is pregnant and seeking concurrent pregnancy termination which is illegal in several of these countries.

5) Scheduling of surgical contraception in rural areas may depend on inclement weather patterns, seasonality of conceptions, occupational responsibilities, especially in harvesting agriculture products, and on mobility of rural nomadic populations.

6) Completeness of reporting of complications may depend on availability of compensation for treatment, pregnancy care, burial expense, etc. This study group generally opposed the practice of financial compensation for those who die following sterilization complications.

7) The advantages of integration with MCH services include a) use of common facility, b) improved acceptability when provided with selected health services. The integration of health services with family planning may be especially useful for a voluntary organization. The disadvantages of integration with government MCH services is a) the low priority often given family planning, and b) the lack of adequately developed MCH services. Regardless of mode of delivery, sterilization services should only be provided in conjunction with interval methods of contraception.

8) The duration and details of training physicians to do sterilizations vary between countries and previous skills of physicians. Training obstetricians to use the laparoscope requires 2-3 days in Colombia. Training general practitioners in Bangladesh to do minilaparotomy requires 2-3 weeks. Physicians may be trained most appropriately in their own country or in regional settings comparable to their home countries. Expansion of services requires an increase in local or regional training capacity. Paramedics should be trained as support staff and may, under selected supervised conditions, undertake a more major role in expanding sterilization services.

9) Provision of sterilizations in a central facility may be cheaper for

the program and may permit higher quality services (empirical evidence lacking). However, central facilities are usually less convenient and less acceptable to patients. Moreover, if overnight lodging is provided, then costs may be higher.

10) We discussed the pros and cons of laparoscopy and minilaparotomy. Representatives from Nepal, Colombia and the Philippines favored the laparoscope, particularly for high volume centers doing sterilizations in an ambulatory care setting. Proponents of the laparoscope claim it requires less light, permits more rapid sterilizations, requires less medication, and is more popular. However, high initial costs and high maintenance requirements make laparoscopy particularly useful for high volume centers. A laparoscope costs about $6,000, and maintenance costs average $2,000 per year. Assuming an average equipment life span is 4 years, the equipment cost per year is $2,000. Then the cost per 10,000 procedures ranges between $400,000 and $4,000 depending on whether 1 or 100 procedures are performed each week.

| Procedures | | Equipment Cost | |
|---|---|---|---|
| In 1 Week | In 50 Weeks | Per Procedure | Per 10,000 Procedures |
| 1 | 50 | $ 40 | $ 400,000 |
| 5 | 250 | 8 | 80,000 |
| 10 | 500 | 4 | 40,000 |
| 20 | 1,000 | 2 | 20,000 |
| 50 | 2,500 | .80 | 8,000 |
| 100 | 5,000 | .40 | 4,000 |

I infer that physicians who perform sterilizations infrequently should be trained primarily in minilaparotomy procedures while physicians performing large numbers of sterilizations with adequate equipment logistics and maintenance support might preferably use the laparoscope. In several programs, physicians perform 1,000 or more laparoscopic sterilizations per year.

Marilyn Schima, R.N., Ph.D., Executive Director of WFAAVSC, requested that CDC provide assistance to WFAAVSC in collecting and analyzing data on sterilizations. This would require a trip to New York City in May 1981 and to Cairo, Egypt, approximately November 1981.

Ms. Beth Atkins will prepare a detailed report of the Study Committee work.

During a brief 7 hours between flights in Geneva, I was picked up at the airport by Dr. Brian McCarthy and visited the World Health Organization, where I interviewed Dr. Alex Kessler, Director of the Special Programme for Human

Reproduction, and two of his staff, Dr. Mark Belsey and Dr. Julian Gold. I debriefed Dr. Susan Holck on her recent consultation to Bangladesh, and met with Dr. Brian McCarthy to discuss his work with the MCH Division. Dr. Alex Kessler and I explored opportunities for collaborative work between WHO and CDC. He expressed particular interest in the study on abortion and maternal mortality in Bangladesh. I subsequently reviewed their 1980 annual report and concluded that consultancies for WHO, collaborative training activities, and support for internationals who have been trained in epidemiology at CDC are three areas for potential collaborative work consistent with our respective objectives.

Dr. Brian McCarthy and I discussed the establishment of a collaborative perinatal surveillance project between WHO, CDC, Emory University, and the Georgia Health Department.

I consulted with Dr. Pramilla Senanayake and Dr. Dorine Kramer, IPPF/London, in the development of the international survey of fertility and fertility control-related deaths in IPPF-associated countries. We reviewed the final draft of the questionnaire and letters to be sent to the FPAs and made some final revisions. Dr. Kramer indicated the survey would require 6 months beyond her scheduled assignment and asked whether she could be considered for an extension. I agreed to consider the request if she had concurrence from Dr. Paul Wiesner.

IV. RECOMMENDATIONS

1. Since the laparoscope is an extremely useful instrument for high volume sterilization services, the Centers for Disease Control should consider training and assigning public health advisors (PHAs) to national and international programs providing sterilization services. These PHAs could markedly facilitate logistics, equipment maintenance, and clinic supplies. Moreover, with medical epidemiologist training and supervision they could assist in monitoring serious complications. This might be analogous to their role in using the jet injector gun in the eradication of smallpox and other immunization programs. This would be a useful contribution to the delivery of maternal health care as part of primary health services.

2. CDC (FPED) should provide epidemiologic assistance to the World Federation (WFHAAVSC) in a) collecting and analyzing data on sterilizations, and b) epidemiologic investigations of clusters of sterilization-associated deaths.

3. CDC (FPED) should collaborate with WHO, when consistent with both

agencies' missions and available funds, in collaborative epidemiologic investigations and training activities related to human reproductive health and family planning service delivery.

4. FPED should continue collaboration with IPPF in an international survey to detect sterilization-associated deaths.

Roger W. Rochat, M.D.

Table 1

STERILIZATION-ASSOCIATED DEATHS IN COLOMBIA

| (Approx.) Date of Procedure (Da/Mo/Yr) | (Approx.) Date of Death (Da/Mo/Yr) | (Approx.) Interval Between Procedure and Death | Surgical Approach | How & When Did Last Pregnancy End? | Type of Facility | Anesthesia | Cause of Death/Comments (How could this death have been prevented?) |
|---|---|---|---|---|---|---|---|
| 1st Trimester 1977 | 1977 | 12 hours | Minilap | Interval | Rural | Local and Sedation | Hemorrhage of the utero-ovarian vessels. Insufficiently trained surgeon closed instead of opening widely and sent the patient to a far away place. She died on arrival |
| June-July 1979 | 15 days later | 15 days | Minilap | Interval | Urban, Uni-purpose Clinic | Local and Sedation | Tetanus |
| March, 1980 | Same day | Minutes | Laparoscopy | Interval | Urban, Multi-Purpose Clinic | Local and Sedation | Respiratory depression at the end of operation. When attending nurse gave warning she was deeply Intubation was difficult and when finally done the heart had stopped. |
| Aug. 1980 | 12-14 days later | 12-14 days later | Laparoscopy | Illegal Abortion 10 days before Sterilization | Urban, Uni-purpose Clinic | Local and Sedation | Tetanus. The patient had had an illegal abortion 10 days before the sterilization. Nevertheless, we accept the latter as the official cause of death. |

Source: Dr. Miguel Trias, Director, Urban Program, PROFAMILIA, Colombia (personal communication)

Table 2

SURGICAL STERILIZATIONS, BY TYPE OF PROCEDURE,
PROFAMILIA, COLOMBIA, 1973-1980

| | Total | | Minilaparotomy | | Laparoscopy | | Other | |
|---|---|---|---|---|---|---|---|---|
| | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| 1973 | 338 | *100.0* | 338 | *100.0* | | | | |
| 1974 | 1,912 | *100.0* | 390 | *20.4* | 1,286 | *67.3* | 235 | *12.3* |
| 1975 | 8,058 | *100.0* | 2,810 | *34.9* | 5,121 | *63.6* | 127 | *1.6* |
| 1976 | 18,039 | *100.0* | 8,597 | *47.7* | 9,163 | *50.8* | 297 | *1.6* |
| 1977 | 37,117 | *100.0* | 21,296 | *57.4* | 15,499 | *41.8* | 322 | *0.9* |
| 1978 | 40,352 | *100.0* | 21,656 | *53.4* | 17,158 | *42.5* | 1,538 | *3.8* |
| 1979 | 47,646 | *100.0* | 23,263 | *48.8* | 22,854 | *48.0* | 1,550 | *3.2* |
| 1980 | 36,460 | *100.0* | 13,723 | *37.6* | 22,017 | *60.4* | 720 | *2.0* |
| | 189,922 | *100.0* | 92,073 | *48.5* | 93,098 | *49.0* | 4,789 | *2.5* |

Table 3

STERILIZATION-ASSOCIATED DEATH RATES, BY TYPE PROCEDURE, PROFAMILIA, COLOMBIA, 1973-1980

| | Procedures | Deaths | Rate[1] | (95% C.I.) |
|---|---|---|---|---|
| Minilaparotomy | 92,073 | 2 | 2.2 | *(0.3-7.3)* |
| Laparoscopy | 93,098 | 2 | 2.1 | *(0.3-7.7)* |

[1]Per 100,000 procedures